

REMARKSStatus of the Application

Claims 14-17, 24 and 25 are pending. Claims 14-16 are allowed. Claims 17, 24 and 25 are rejected.

Note on Amendment to Claim 17

Claim 17 has been amended to include the word "not" which was inadvertently omitted when the claim was previously presented. Applicants respectfully request that this amendment be entered because it corrects an inadvertent omission and because it does not change the sense, meaning or scope of the claim. As the examiner correctly noted on page 3 of the final office action, the claim is directed to a structure having an interference fit between the inner reinforcing tube and the cavity within the inner walls of the corner post. This could only be true if the claim is read in its currently amended form. Since the claim was properly construed by the examiner and searched on that basis, applicants submit that this correction to the claim does not require a new search, and thus the amendment should be entered.

Section 103 RejectionsClaims 17 and 25

Claims 17 and 25 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Tanaka JP 7276543 and an Examiner Official Notice. In response, applicant offers the following arguments in favor of patentability.

The Examiner acknowledged that the Tanaka reference does not disclose an interference fit between the outer support post and the inner reinforcing tube(s). But the Examiner asserts that an interference fit is an art recognized equivalent to the use of adhesives in many mechanical environments, and relies on this assertion to reject claims 17 and 25 as being obvious in view of Tanaka and this general knowledge.

The issue of whether "judicial notice" of "general knowledge" in the art is sufficient to reject claims as being obvious was taken up by the Federal Circuit Court of Appeals in In re Zurko, 258 F.3d 1379 (Fed. Cir. 2001). There, the Court addressed the issue as it pertained to a decision by the Board of Patent Appeals and Interferences (the "Board"). According to the court, deficiencies in the cited prior art could be remedied by the Board's general conclusion about what is generally known in the art. Id. at 1385. The court went on to say that an assessment of basic knowledge or common sense that lacks evidentiary support may be sufficient for conclusions as to peripheral issues, but with respect to "core factual findings" in a determination of patentability, the Board should not simply reach conclusions based on its assessment of what would be basic knowledge or common sense. Id. at 1385-86. Rather, the Board should point to some concrete evidence in the record to support such findings. Id. at 1386.

Applicants aver that a similar standard should apply to a patentability review by a patent examiner. That is to say, with

respect to "core factual findings in a determination of patentability", an examiner must point out some concrete evidence in the record to support such findings.

The requirement in claim 17 that the reinforcing tubes are held in place within the support post by an interference fit is a key requirement of the claimed invention. The determination of whether this limitation was generally known in the art at the time of the invention should be considered a "core factual finding" with regard to patentability, and thus require evidentiary support. Since no evidentiary support was offered, applicant respectfully submits that a prima facie case of obviousness has not been shown for claim 17, and therefore it should be allowed.

Furthermore, evidence that interference fits are commonly practiced in the mechanical arts should not be considered sufficient evidence of to support a finding of non-obviousness with respect to claim 17. To the applicants' knowledge, interference fits had never before been tried in this type of application. Applicants were inspired to try an interference fit because of the difficulty in holding the reinforcing tubes inside the support post by other means, such as adhesive or staples.

Still further, it is applicants' belief that using an interference fit to secure the reinforcing tubes within the outer posts provides an important benefit that would not be realized from the use of adhesives, taping or other fastening means. Using an interference fit to hold the reinforcing tube(s) allows

the high speed production of reinforced posts of virtually infinite length, whereas the application of adhesives or tape or other fastening means would be difficult to accomplish with the kind of high speed machines used to produce such posts, especially if the adhesive or other fastening means is to be applied to the interior of the post.

In conclusion, because there is no evidentiary support that using an interference fit to secure a reinforcing tube between the outer and inner walls of a support post was generally known at the time of the invention, and because using an interference fit provides a significant advantage over the other allegedly art recognized equivalent fastening means, applicants respectfully submit that claim 17 is non-obvious and allowable.

Regarding claim 25, while it may be a product-by-process claim, the structure recited in the claim is similar to that of claim 17. Applicants assert that this structure renders claim 25 non-obvious for the same reasons as claim 17.

Claim 24

The Examiner acknowledged that the Tanaka reference does not disclose an inwardly extending bead or the wedging of a reinforcing tube between the bead and one of the rounded ends of the outer support post. But the Examiner again asserts that an "interference fit is an art recognized equivalent to the use of adhesives" and thus such a fit in this application would be obvious.

First, applicants assert that whether or not wedging a reinforcing tube between a bead and a rounded post end is obvious should be considered a "core factual finding" with regard to patentability, and thus require evidentiary support, of which none was presented.

Second, even if an "interference fit is an art recognized equivalent of the use of adhesives" as the Examiner asserts, that factual finding does not render obvious the invention of claim 24. It is inappropriate to reject claim 24 as obvious simply because an interference fit is a well known substitute for an adhesive fit. Claim 24 does not merely substitute an interference fit for an adhesive fit. Rather, claim 24 recites a specific structure that is not taught in the cited prior art and is not generally known in the art. Specifically, claim 24 requires a reinforcing tube wedged between a bead and a rounded end of the outer support post. This structural limitation is acknowledged by the Examiner to be novel.

For claim 24 to be obvious, the Examiner would have to cite prior art that teaches the structure of claim 24, or at least provide evidentiary evidence that such a structure is generally known in the art. Since none of the cited references teach such a structure and there is no evidentiary evidence that such a structure was known, applicants respectfully assert that claim 24 is non-obvious and allowable over the prior art of record.

Third, applicants wish to point out that, while beads are well known structures for reinforcing purposes, to applicants'

knowledge never before had a bead been used to secure a reinforcing tube within an outer post. While a person of ordinary skill in the packaging arts might know to use a bead to reinforce a longitudinal post, such knowledge would not extend to the use of a bead to secure an inner reinforcing tube.

Finally, using an interference fit to secure a reinforcing tube between a bead and a rounded end of the outer post provides two important benefits that would not be realized from the use of adhesives, taping or other fastening means. One, it allows for high speed production of reinforced posts, which, as noted above with regard to claim 17, would be difficult to achieve with adhesives. Two, wedging the reinforcing tube between a bead and a rounded end adds strength to the corner posts assembly (to prevent buckling under load) that would not be achieved through the use of adhesives alone.


Allowed Claims

Applicants appreciate examiner's statement that claims 14-16 are allowed.

Summary

It is believed that this paper constitutes a complete response to the Office Action mailed February 22, 2006, and an early and favorable action allowing claims 14-17 and 24-25 is respectfully requested. The Examiner is invited to telephone Applicants' undersigned attorney if any unresolved matters remain.

Respectfully submitted,


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